Q U A N T A

T H E   N E W S L E T T E R   O F

T H E   I N D E P E N D E N T   Q L   U S E R S'   G R O U P

VOLUME 1 ISSUE 8

SEPTEMBER 1984

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INFORMATION ON THE GROUP

Membership of the Group is by subscription to the Newsletter which is published monthly. Membership details are obtainable from the Group Secretary. Membership of the Group is open to anyone with an interest in the Sinclair QL microcomputer.

Members requiring assistance with problems related to the QL may call the Secretary. An attempt will be made to put them in touch with a member who can help with the problem.

Workshops will be arranged from time to time in various parts of the country.

The Group maintains a software library. Most of the programs are free to members. The library list is published from time to time in the newsletter.

A membership list is obtainable from the Secretary.

Please send all contributions for the Newsletter to the Editor.

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Contacts in other regions are required. Please give Brian a ring.

EDITORIAL

To make up for the lateness of the last issue, we've made a superhuman effort to get this one out a week later! Once again I am unable to publish everything you have sent in, so bear with me if your golden prose is not reproduced in this issue.

Due to our having brought this issue forward, I have been unable to get it printed on a daisy wheel printer as promised. However, Most of it has been typed into, my system and I've put a new ribbon in my crummy old printer, so it shouldn't be too bad.

As I write this we are getting ready for the PCW show, where we will have a table. Normally it would be a stand, but PCW cocked things up for the ACC, who organise the club and user group stands.

Some of you might have noticed my contribution to the Sportscene version of QL User. EMAP and Sportscene have now settled their differences and from now on there will only be one QL User magazine, published by EMAP. They have asked me to write a page for them on a regular basis, in which I can publicise the group and our activities.

The Swindon workshop date has been fixed - 9/10/11 November. We get very favourable rates at the hotel, and they treat us very well, so it should be an enjoyable weekend. Like the recent MK workshop, it will be shared with NATGUG. We already have one speaker - Chris Scheybeler of GST will be giving a talk - but we need lots more. Please ring Brian if you have any suggestions for topics or you feel like making your own contribution.

Leon Heller

MEMBERS' LETTERS

Ok Ok Ok here is my £12 please don't make this my LAST newsletter! You're not gonna senda da boys round are you?

Seriously though, I find Quanta very interesting but in many cases almost illegible, the best bit of printing so far was the blood red warning I got this month.

If the 500 odd members re-new their subscription please invest in a daisy wheel printer and try and improve the standard of the offset litho printing. I for one would be quite happy to pay a couple of quid more a year to receive a Quanta that I can read easily.

I would like to see unbiased and perhaps less technical reviews of business software as and when it becomes available for the QL. I am looking forward to Leon Heller's evaluation of 68K/OS.

Keep up the good work.

Mark Taylor,
23 Kesters Road,
Chesham,
Bucks.
HP3 1RP.

QUANTA - Letters to the Editor

First, a little about myself to show that I am "no wally" and ought to know a little about what I am talking about.

I was employed for several years as an electronics designer of extracted proton beams on high energy particle accelerators at the Science Research Council's Rutherford Laboratory. This also, entailed programming in FORTRAN on Atlas - a £12 million computer of the 60's. I now own and run a small truck business of £0.5 million turnover in which I am the only office staff. All the books etc., etc., running under my own software on an Intertec Superbrain.

For the year prior to March 1984 I ran a Bulletin Board, CBBS North-East.

In February of this year, with two Professors of Computer Studies we formed a company to write specific software under contract for those needing a (hopefully) high level solution. I am the "gofer" as I am not sufficiently advanced in programming, but have decided to learn 'C' so that I keep active and can assist when required.

My 13 year old son has a Spectrum with microdrives, interface 1,Prism VTX5000 etc., and my 11 year old daughter a Casio. I also use an IBMpc when I visit a University, this machine residing with me during University vacation times. The machines (now including the QL with its Kaga III monitor) can all "talk" to each other and be connected to a choice of 5 modems (to differing standards) and with 2 answering machines can be connected to a choice of 3 phone lines.

I fell, hook line and sinker, for the advertising claims and ordered a QL (with a VISA card) which duly arrived at the end of May. My interpretation of it's specification was that it would replace my 3.5 year old Superbrain, and with the promised 'C' compiler would be suitable for future use.

N O   W A Y

I think that it probably represents reasonable value fee money, particularly if you want the associated (it is incorrect to use the word FREE as it is part of the price) software. However, for the market at which it is aimed - the supposedly much more expensive machines - what a bloody awful machine it is, and should not be even considered by anyone with serious business use.

1. The keyboard is absolutely atrocious.

2. Microdrive access time is painfully slow.

3. SuperBASIC (and that's all we have at the moment) is also painfully slow. So slow that it is impossible to get a terminal program to operate without handshaking above 300 Baud, which eliminates the use of modem communication.

4. Quill lacks many Wordstar features, including the most important of all, the ability to act as a general editor in the "non document" mode. Plus the inability to utilise the Epson features of expanded and condensed type.

5. Without documenting the differences, Abacus is not as good as Supercalc.

6.   They will no doubt come along from the independent Software house sometime - though the absurd cost of a blank microdrive cartridge of only 100k storage may put them off - but a machine is also unusable without some utilities.
   However, I am stuck with it now, and I intend to soldier on, and hopefully, with the help of QUANTA expect that things will improve as the "feedback" gets through to Sinclair Research. This naturally brings me on to:-

Q U A N T A

I don't realty know where to start! First my cheque for £6.00 for Vol 1, 7 - 12 is enclosed. Like the QL itself, in spite of the comments which are to follow, I intend soldiering on

1.   Most of the letter writers, even from the very beginning have been praising Quanta. This led me to wonder, is it me, or is it like all the articles in PORNO mags, the editorial staff make them up.

2.   Leon, you have my greatest admiration for being able to waffle on for more than 3 issues without saying anything of value or interest other than to a chosen few.

3.   In commenting on the K & R 'C' programming book being expensive at £17.00 for 220+ pages, I (for the moment) feel the same about QUANTA.

4.   The main point about QUANTA is the content.

QUANTA CONTENT

The majority of letters which you will receive will be praising it, and further will want the content to be hardware and software based in depth, circuits, assembly language, tricks and wrinkles etc. From this one would assume that this is what the majority of the membership would require. However this is not necessarily so. Any structured society can roughly be divided into two groups, the silent majority, and the vociferous minority. It is invariably the latter which have the influence.

It is my belief (in conjunction with 1 correspondent in issue 4 and 1 in issue 5) that bearing in mind where the QL is pitched, the vast majority of users will not be interested in going into the "far end of a f*rt" in either hardware or software. Without being at all sneering (and my wishes for content go along with theirs) they will generally be 1 or 2 steps up from being computer wallies.

They are likely to be of above average intelligence, good at their jobs, and want to use a computer as a TOOL to make their jobs more efficient. They do not want to introduce another "hassle" factor into their lives. Such people know their own business best, and are therefore better equipped to develop/utilise software to increase their efficiency as opposed to the standard bigger business practice of calling in the experts, who since they are only going to collect £2-5,000 are not going to put in the time required.

Well, that just about wraps it up. I have used QUILL to write this and posted the microdrive cartridge to Leon so that he can format it etc., etc., to his little hearts content, without going to the time wasting effort of typing it all in again. Might I suggest that ALL contributions are sent in this way? It is standard procedure in some groups.

Trevor Smith

I've managed to interface my Brother EP-22 with built-in RS-232C to the QL - it requires OPEN #3,ser1c and BAUD 300 to print to channel 3.

I use a Ferguson TX 14" for display which seems satisfactory stability-wise but loses about 50 pixels off the left edge in Monitor mode, and-50 Pixels when you redefine a window in TV Mode to be full-size - so I would recommend that anyone writing games software should write it in TV Mode, and when defining windows take account of page 16 in the Concepts section on the default values of the console. Thanks for a great user's magazine - it really fills a gap.

Good luck with your software library. I'm working on some programs myself:-

        Morse code trainer
        C.A.D. (of which I've written two for the BBC)
        Telephone directory (simpler than Archive)
        Games (although I hope to get an assembler first, as hand coding would be certain death)

As soon as these are completed I will send in copies for your library.

R. Snowdon,
Snowsoft (c),
6 Bousfield Crescent,
Newton Aycliffe,
Co. Durham.

Please don't forget the beginner when writing your (our?) magazine. Perhaps someone could write a glossary of the jargon used in computers, or recommend a book if one has been written.

Norman McComb,
8 St. George's Way,
Taunton,
Somerset TA1 3SB.

/* Can we have some beginner's articles, please. PCW has a glossary in every issue. Penguin publish a computer dictionary. */

Is anyone out there interested in writing programs for interactive philosophy texts, using the adventure techniques on a philosophical argument?

Stephen Clay,
1 Arnside Road,
Oxton,
Birkenhead,
Merseyside L43 2JU.

Re the spare 4K problem, like others of my peer group I have bought my QL to use in the lab., to help me with my doctorate, as the QL is the only serious computer available to most people on a student grant, and who don't want to have to book a terminal on the mainframe. Hence my disappointment at the QL's lack of mathematical accuracy. If the QL is aimed at the serious user, university students may

well form a major group of these. For people like myself, double-precision maths and fast integer maths are a necessity. My chemistry model simulation may well extend to the solving of c. 1000 simultaneous equations, so you see my problem.

Despite this, Quill is good enough to word-process my thesis and Archive to hold my references!

Roger MacNichol,
15A Harley Road,
Oxford OX2 0HS.

/s The arithmetic precision on the QL is insufficient for most business users, also. It wouldn't be so bad if a true 32-bit integer was available, since one could then use fixed point arithmetic, and 32-bits is more than enough for most small business accounting applications (about -21,474,836.00 up to +21,474,836.00, give or take a pound or two). The Pascal available from Computer One allows the use of a 32-bit long integer, so they tell me. x/

You may like to know that I had my call on 2 August to return my QL (version FB received 1 June on order placed 25 January). I dispatched the computer the same day and the JM replacement arrived on 9 August, well within the 10 days!

The BASIC now runs up to 20% faster and -2^x (x integral) now evaluates properly so that there is no more $-2-2=0$ nonsense. However, terms of the form $-x^n$ standing alone or coming first in an expression are still evaluated as $(-x)^n$, so that $-x^n -x^n$ (n even integer) still returns 0.

The serial number of my QL begins D05 but during the upgrade a label marked D09 was affixed. I find however that all the bugs mentioned in September What Micro (p 9) as being found in a D06 model remain in mine.

H.J. Millen,
17 Castlemaine Avenue,
South Croydon,
Surrey CR2 7HU.

———————————————

I have noticed that several people have criticised the way Microdrives are defined, i.e. LOAD "mdv1_prog". Although this seems long-winded it is a way that, firstly, can define which Microdrive is to be used, and secondly, may allow programs to be adapted if other mass-storage devices are added, so when (or if?) Sinclair bring out the Winchester disks programs may be loaded as LOAD "win1_prog". The same syntax may be used for floppy disks and cassette drives. It can be seen that a 'file specifier' consists of two parts: the MSUS (Mass Storage Unit Specifier) and the filename. To separate the two parts a character is required, hence the '_'. I've noticed that various programs so far ask for the Microdrive number and then the 'Mdv' is added in the software. These programs will have to be altered if they are to be upgraded to allow disk access. It seems a pity that Sinclair has not allowed a default MSUS, which would have saved a lot of typing.

I thoroughly enjoyed the day Conference on the QL yesterday. It was not just gleaning the extra bits of information, but also finding out what is still unknown and gaining some impression of when a more complete QL with more comprehensive software and interfaces will appear. Tony Tebby's contribution was illuminating if not a bit sobering. So also the impressive 68K/OS described by Scheylbeler. Should I have bought a QL? Doubtful in the cold light of day, but it offers the promise of a cheap(er) entry to 16 bits and in the mean time is a challenge.

I enclose two programs which print out memory on the screen and either to the lineprinter or into a file. I had not appreciated until yesterday that printing 'hello' to the lineprinter simply involves:

```
10  OPEN#3,ser1c
20  PRINT#3, "hello"
30  CLOSE#3
```

This is a bit more lengthy than 'LPRINT', but not too bad. I had previously printed in Basic from a file by using COPY mdv1_FILE TO ser1c

W.T. COWHIG,
21, Priory Road,
SALE, M33 2BS,
Cheshire

Dear Ms Jones,

Ref:N004817810 Card no: QL ser no: D05-002419
Ref:SMJ /DN Your letter dated 18th July

I ordered my QL in response to your advertising claims and was extremely disappointed at the long delay before delivery. Nevertheless, I ignored all the press discussions on the machine and hung out for its delivery. This in spite of the fact that a few years ago I had very bad experiences with a ZX81 plus ancillaries which was replaced and eventually returned for a refund. The Kaga III I ordered to go with the QL arrived within 7 days, i.e., about 4.5 months before the QL!

Whilst I still consider that the QL probably represents good value for money, particularly if you want the software, I am returning it to you for a complete refund. It was purchased to supplement an ageing Superbrain, an IBMpc and a Compaq.

It is not 32 bit, it is not multi-tasking, its operations (in SuperBASIC - all that's available) are extremely slow. The keyboard is atrocious, with the left-shift key regularly sticking down. The claims for the software are excessive, as Quill, Abacus and Archive, cannot compete with Wordstar, Supercalc and DBase II.

The microdrives don't always read /write first time, (aside from the fact that they are incredibly slow, rendering the machine unusable for serious work) and now, to top it all, the machine keeps "crashing" after it has been running 2/3 hours.

Yours sincerely,

Trevor Smith

I intend, in the near future, to let you know how the QL interfaces with a Brother EP44 printer/typewriter.

Kevin J. Bear,
PDO,
XTD/11,
P.O. Box 81,
Muscat,
Sultanate of Oman.

The last issue was so badly printed that I almost couldn't renew: it seemed like rewarding incompetence; and the amount of useful (or apparently and obviously) info. in the first six issues was dangerously low, and therefore often boring, except for the cognoscenti.

But - the duplicate program was very useful, because, alone with all the bugs, I have had grave problems with both COPY and BACKUP (both on SuperBASIC and Psion software) which so far have worked either erratically or not at all.

Sinclair persuade people to buy the QL on the strength of a high reputation plus some large claims. They then provide us with a club at £35 pa which will listen to the complaints which arise because the claims are not yet reality. Since Psion have to pass on large numbers of the complaints perhaps it hasn't helped them all that much.

One of my mdvs had half its files corrupted (half a week's work went there) and now the Archive cartridge has gone back to Sinclair. FIND, Search and SELECT only worked intermittently and getting hold of data which went in smoothly became more and more difficult.

Please, no more about the MC68008 or about languages not usable on the QL except by the experts, unless you can point to its value to US.

The monitor provided quite a saga. My local store offered me a Fidelity CM14.-but had no leads for the QL. When the lead ordered from Sinclair arrived the branch told me that it lacked resistors and the info. sheet from the Manual could not be correct - the monitor needed resistors. So I rang Sinclair and a Mr. Marcus Williamson informed me (a) that the manual sheet contained errors (he didn't saw why this hadn't been notified to me with the lead when it was sent) (b) no resistors were required with the lead plug. Nevertheless. when contacted the suppliers of the Fidelity monitor insisted that resistors were required and they produced the required lead. Once fitted, the monitor worked well.

John Roberts,
19 White Horses Way,
Littlehampton,
West Sussex BN1 7GH.

/* This newsletter is for everyone, beginners and experts alike. After all, beginners eventually become experts by gradually acquiring more knowledge. Now that assemblers and alternative high-level languages are available on the QL, I anticipate a lot more articles on advanced topics, together with, I hope, plenty of articles for beginners and people who just want to use the Psion packages. */

Thank you for the back numbers of the IQLUG Newsletters received today. I congratulate you on the production of a Newsletter so full of interest at such an early stage in the QLs life. It compares more than favourably with the first issue of QLUB NEWS which, to put it mildly was a great disappointment!

My QL, version AH, which arrived in June, lives up to expectations and is far better than I had been led to expect from all the reports. It is a great advance on my previous TRS80 Level 2, which I used for several years. The only bug, to data, is the DATE$ command which presents me with a clock that runs very fast indeed - at something like twice the proper rate. I'd be interested to know if this is a known fault or something unique to my machine. So far I have not complained to Sinclair.

With reference to Issue 6 page 27, final paragraph, I too can get the message "At line 200 bad or changed format" when attempting to load Quill. However I discovered that this only happened after formatting cartridges without using a 'volume' name. Formatting a couple of times, using a name always clears the fault and it does not recur - I haven't the faintest idea why this should be so but it works on my machine!!!
P.I. FOTHERBY,
'Russets',
1 Pinkneys Drive,
Pinkneys Green,
Maidenhead,
Berks.

I have just typed in the complete source code for 68000 Forth, taken from the Fig-Forth listing, but translated to run under the CP/M cross-assembler. Unfortunately it is a 16-bit version which will only run in the first 64K page of memory, and I haven't decided how to deal with this yet. Would you like me to send you a copy?

D. Stevenson,
P.O. Box 508,
Muscat,
Sultanate of Oman.

/* I haven't got the time to do anything with Forth. Would anyone else like to have a go? The Fig people told me that the 68000 listing is full of bugs, when I spoke to them about it some months ago. Several members are interested in putting Forth on the QL, although Computer One (see advert. in the August issue) are selling it quite reasonably. */

PROBLEM SECTION

I am developing a set of one or two character named procedures, which can be called directly from the command level, to do things like LIST, SAVE, COPY etc. All these will work once you have set up a device name, for example:-

```
"prog$ = mdv1_'&name$
SAVE prog$
```

All that is except MERGE or MRUN which stop with the error message 'not implemented'. They will work in a simple program, it appears, but not from a procedure. Any ideas?

Peter King,   /* I am not sure about the surname, due to grotty writing.
2 Belvedere Avenue,
Penn,
Wolverhampton WV4 5TD.

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How does anyone deal with user-defined graphics, and/or POINT from the screen, quickly from BASIC. PEEKing and POKEing are too slow.

Richard Snowdon,
6 Bousfield Crescent,
Newton Aycliff,
Co. Durham.

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Can a member supply a quick answer to the following. I thought when I ordered the QL that there would be no problem, what with all their talk of coercion and DEF FUN.

Briefly, the requirement is that given several simple variables such as a, b and c, to evaluate the function F$=a+b*c-3, with F$ being input by the user without access to the program listing itself.

On the Spectrum VAL(F$) gives the required result, surely the QL can do as well.

It seems no use placing the function within DEF FN() as this does not evaluate the function. Of course, I know that I can bury a large number of formulae within the program, which is what I do on the PET, but it means that I have to be called in every time the formulae need changing.

D.D. White,
107 Cwm Road,
Dwserth,
Clwyd LL18 6HR.

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Which printer is best? I like the look of the Brother HR5 (£149.95 from Computec, Glasgow) or its very close relatives the Brother 4QL (Sinclair User p 112/125) at £189.95. Worth the extra £40? What do you think?

Mark Haigh,
82 Towers Road,
Poynton,
Cheshire.
/* Have any members any experience of these printers? */

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(1) Can anyone set the multi-tasking clock program as listed in the User Guide to work?

(2)   A bug in Archive 1.01 - if you are in mode 0, and have named more than 19 procedures, and go into edit, the system crashes with the report 'Bad Line'. Nice one, Psion.

(3)   In Quill 1.03 - I find that on some occasions the cursor gets 'stuck' and will not move using the cursor keys. I've found that by pressing F2 twice which re-formats the display the cursor, is released.

(4)   In Quill 1.03 - if you select F2 (TV mode) so that you display 64 characters per line and use DESIGN to set the document width Greater than 64 characters, when you try to print, Quill prints about four lines of text per page, and then advances the paper to the next sheet.

(5)   Does anyone know why it takes so long to save or load a document using Quill? The drives run for ages.

(6)   Does anyone else have problems with compatibility between the two Microdrives? If I format a cartridge or save a program on one drive it will not work on the other.

(7)   Is the year 2000 a leap year? It is on the QL date$ function. What a pity the clock does not have battery back-up as per the provisional specification.

Melvyn Pearce,
21 Hall Meadow,
Wedges Mills,
Cannock,
Staffs. WS11 1TS.

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Can IQLUG get Sinclair to suggest a modification to reduce the scan width of the RGB output of the QL. I've got a Microvitec 1451 med. res. Even this cannot accept full 80 column mode and the Psion packages have to be run in 64 column mode.

I cannot understand why the QL won't talk to my FX8O fitted with the MCS serial interface using handshake. It does work with handshake off using 'ser1i' at 1200 baud in the immediate mode, but I cannot see how to switch handshaking off from Quill etc.

Dennis Long.

/*   Microvitec make a special version of their 1451 monitor for the QL. the 1451/M03. They tell me that other models will not work satisfactorily. */

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Can anyone help concerning the connection of a Brother HR5 printer to the QL. After reading a letter from P. Goff in Issue 6, I soldered another wire from pin 6 to pin 8, of the connector. The printer still did not work. The HR5 pin connections are:-

Pin	Signal
1	Protective ground
2	Transmitted data
3	Received data
4	Request to send
5	Clear to send
6	Data set ready
7	Signal Ground

8	Received line signal detector
11	Secondary request to send
20	Data terminal ready

K.G. Nicholls,
24 Heath Grove,
Meir Heath,
Stoke-on-Trent,
Staffs. ST3 7JT.

I would like to know how to program the F1 to F5 keys. e.g. F1 = CLS and RETURN, F2 = RUN and RETURN, etc.

Tim Fuller,
5 Chetwynd Drive,
Bassett,
Southampton,
Hants. S02 3HY.

/*   The so-called function keys are really not function keys at all, in the sense of the function keys on the Beeb, for instance. They are just the same as all the other keys and only return a single code when depressed. I do not think the facility you require could even be provided b software, as the keyboard is controlled by its own processor, unlike machines like the Tandy Model 1, where you could patch in your own keyboard driver to enable whole strings to be assigned to individual keys. Has anyone else got any ideas about this? */

After using Archive to catalogue nearly 500 slides (not all at once!) the keyboard locked up. Fortunately most records were already saved on Microdrive. However, on resetting, loading Archive and opening the file, I was unable to access any of the records. Why does the keyboard lock up? How do I re-establish contact with my files? Is it just me or is it the program/Machine?

Norman McComb,
8 St. George's Way,
Taunton,
Somerset TA1 3SB.

/*   If this was an isolated occurrence, it was probably caused by a 'glitch' on the mains. You have probably lost everything if you Just saved the file to the one Microdrive cartridge. With important data it is wise to use two cartridges alternately. */

As I have not previously had a computer (discount the ZX80), please explain to me why BASIC Programs, e.g. for the Spectrum, cannot easily be adapted to run on the QL.

How does one view an entire SuperBASIC directory when it has too many lines for the screen? I have found a way using Quill, but that's laborious.

How does one SAVE a modified program in SuperBASIC without also having to delete the original?

Until the fabled EXEC becomes operative, how can one best combine programs to run in sequence?

Is the time clock ever going to be equipped with a battery? How does one use the Turtle Graphics? The Manual does not say.

Even if Flash is hardware controlled, is it not possible to produce it using PAUSE?

When I tried to run a 300 line Program I found two problems. First, it won't run and I don't know why (I suspect more bug) but the listing produced a series of new AUTO-generated numbers with the word 'MISTake' starting every line. MISTake looks like a keyword, but one of the subterranean ones not listed. What's it all about?

John Roberts,
19 White Horses Way,
Littlehampton,
West Sussex BN1 7GH.

/*   Until all the machines get upgraded, it would be wise to include the version number of your software, with queries like these.

There is no reason why Spectrum programs cannot be modified to run on the QL. I know of at least one member who has done this.

To save a modified program without deleting the original, just give it another name. SAVE 'mdv1_fred1', SAVE 'mdv1_fred2' etc., for each new version.

I cannot see Sinclair providing a battery for the clock, as it would need a PCB re-design.

The new manual which should be out soon will have more information on the Turtle Graphics.

Can anyone help with the other problems. */

I would be grateful for some advice about the best monitor to buy for my QL as the TV is not satisfactory, and also whether I will have problems with the escape codes when I have installed a printer. I am considering purchasing a Microvitec 1451/DQ3 monitor when available but wonder if a JVC would do as well???

G. Timson,
St. Enys Road,
Camborne,
Cornwall TR14 8TW.

As I said, I am a total beginner in computing & at present just trying to get the hang of SuperBASIC & trying to penetrate what sense may lie hidden by the extraordinarily incompetent Manual - my main grievance at present being that the chap writing it doesn't seem to have known that READing DATA seems to wipe out whatever you've just so painstakingly typed in unless you put a RESTORE somewhere in the programme (I've wasted several days & hours in the process of discovering this!)

Among the questions I'd like to ask someone are

i) Is the problem I've outlined above just a peculiarity of my stage of the computer's production (my version is 'PM') so will disappear once upgraded?

ii) Is it worthwhile joining the QLUB: is it really value for what seems a lot of money?

iii) Does anyone know how I join up my QL to this typewriter - a Silver-Reed EX43 - which is what I want to use for printing; presumably I need to buy some interconnection but I'm not sure what.

Why I've stressed that I'm a beginner is that although I've read most of what has appeared in the popular computing press about the QL, no-one has mentioned the disgraceful state of the 'Beginners Guide' from which I conclude that most users/reviewers have had no occasion to consult it, or at any rate try to learn from it, being at too sophisticated a level to need it.

iv) Has anyone else tried the game 'QL Quest' in something called "QL User" (but a different "QL User", I think, from the "QL User" in which I saw your ad; most confusing!): is the programme right? I couldn't even find the gem, let alone escape with it - but then my microdrive crashed & I couldn't face typing it in all over again!

John Fauvel,
5 Marshworth,
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I now have the AH version of the QL, Quill version 1.03 and a Miracle Systems interface to an MX-80 printer. I've installed the FX-80 printer codes, hoping these fit the MX-80. Presumably they don't as I still can't get the printer to underline, print in bold, or print sub and superscripts. Psion have responded to my first enquiry with documentation reproducing what is in the manual.

More serious faults. Every so often Quill decides that a file doesn't exist on the mdv2 cartridge, though it will read the same file copied onto another cartridge. It also quits at odd moments, insisting that it can't open a file on the mdv2 cartridge. And finally, it freezes entirely at unpredictable intervals, leaving one with nothing to do but reset. Quill has suddenly. started to give the option of saving the document. It always abandoned everything until today!

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/* Your version of Quill might have become corrupted in some way. If the problems with mdv2 manifest themselves only after the machine has been on for some time, the microdrive could he exhibiting the temperature sensitivity that some members are experiencing. Mdv2 is closer to the power supply and therefore runs hotter than mdv1. It might be best to return the machine to Sinclair. */

LOADING A PROGRAM INTO A QUILL FILE

The enclosed program is not as interesting as the fact that it is included in a Quill file. I achieved this by loading it under SuperBASIC, opening a channel 'OPEN_NEW #3, MDV2_EXPORE_TXT', listing it to this channel 'LIST #3', and closing the channel 'CLOSE #3'. I then entered Quill and imported the file. Does anyone know how to reverse the process so as to use Quill as a program editor?

The information revealed by the program is minimal, 4K of empty EPROM from 44K up, the BASIC keyword look-up table-in RAM just above the user program. The really interesting information will have to wait till I get a disassembler. Do you know of one, or do I start writing it myself?

```
   10 REMark this is an exploratory prog
   20 start=64*4096: finish=40*4096
  100 FOR a=start TO finish STEP -25
  110    display
  120 END FOR a
 1000 DEFine PROCedure display
 1010    PRINT #1,a,
 1020    FOR b=0 TO 24
 1030       c=PEEK(a+b)
 1035       IF c<32 OR c>127 THEN c=46
 1040       PRINT #1,CHR$(c);
 1050    END FOR b
 1060    PRINT #1
 1070 END DEFine
```

As you will gather from all this, I an interested in the inner workings of the machine, and improving them, rather than using the machine for advance planning of my bank account or graphical representations of the overdraft. The lack of a full-screen editor takes me back to the UK101, and that was soon fixed by the user group. The reason WHEN ERROR is not yet implemented surely can't be lack of time or room, so what went wrong?

David Stevenson,
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Muscat,
Oman.

EDITING AND AUTO

I've returned my QL to Sinclair for a refund, saying I would reconsider it in a few months time when they had ironed out the bugs.

While I had it I discovered something which may be of interest, which is not apparent from the manual. The QL editor has rightly been criticised as being inadequate. If however, the AUTO command is used editing becomes very simple. The line numbers have to be evenly spaced so it may be necessary to use the RENUM facility. Then AUTO can be used at any point in the program. The line number details will appear in channel 0. Any modifications can be made and <ENTER> depressed. This brings up the next line number and so on. Holding down <ENTER> means that you can scroll through the program very quickly. Using the cursor up and cursor down keys means that you can scroll backwards AND forwards very quickly, editing where necessary.

Starting at line 10 or wherever, it is very easy to check listings, editing as each error is found and automatically proceding to the next line number. As only one or two

line numbers are visible in channel 0 at any one time, it is very easy to check the details against any listing. Hitting ctrl <SPACE> leaves AUTO.

Not bad for a machine with a "Micky Mouse" editor! If only the rest of the machine was as good.

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Merseyside.

HOW BASIC LINES ARE STORED

Basic lines are stored in an odd way, all based on 16-bit words:-

Word 3 is the line no.
Word 2 is always $8D00
The last word is $840A

REM seems to be $811EBC00 followed by the length of the rest of the line, not including the null to round off the word size if necessary.

The whole lot moves up and down memory a page or is it 512 bytes at a time, suggesting that the words are addresses relative to a pointer, as the keywords sit above the program in RAM and are extended to hold variables, PROC, FUNC etc. The only problem with expansion is finding the address of FENCE to stop everything being cleared every other minute.

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USING QUILL AS A SCREEN EDITOR FOR BASIC PROGRAMS

1. Load the printer install program from the 'QUILL' cartridge.
2. Set up a printer (named MDRIVE perhaps?) with the following settings:

Lines per page   :0
End of line   :10 (Line feed only)
End of page   :None

The rest of the settings are as per the 'OTHER' printer settings.
3. Install the printer.
4. Load 'QUILL', write BASIC program, and save to microdrive as a document as this is the only way I've found to edit the source file.
5. Print document, but insert filename where the default option is 'printer'.
6. Exit 'QUILL' and use the 'MRUN' command i.e. MRUN MDV1_PROG_LIS.

Note: this will not work with Quill version 1.0.

We are working on a golf simulation game which will be ready soon, but there is a bug in the SuperBASIC 'CALL' routine which is stopping me adding the machine code subroutines which will distinguish it from the rest!

I would like to ask other QL_ users what sort of programs you would be interested in seeing developed for the machine. I envisage a large market for 'thinking games' i.e. simulations like golf and flight, and adventures, but not for the more traditional arcade-style games. As a company we obviously want to provide software that would

appeal to a wide market and would therefore value your comments.

Derek V. Wilson,
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QL MULTI-TASKING

This program generates an on-screen read-out of the real-time clock, running as an independent job.

First RUN this program with a FORMATted cartridge in Microdrive 2. This generates a machine code file called "clock".

Then type:-

EXEC mdv2_clock

and a continuous time display will appear at the top right of the command window.

```
 100 c=RESPR(100)
 110 FOR i=0 TO 68 STEP 2
 120    READ x:POKE_W i+c,x
 130 END FOR i
 140 SEXEC mdv2_clock,c,100,256
1000 DATA 29439,29697,28683,20033,17402
1010 DATA 48,13944,200,20115,12040
1020 DATA 28691,20033,17402,74,-27698
1030 DATA 13944,236,20115,8279,-11314
1040 DATA 13944,208,20115,16961,16962
1050 DATA 30463,28688,20035,24794
1060 DATA 0,7,240,10,272,200
```

N.B. Line 1060 governs the position and colour of the clock window - the DATA items are, in order:-

BORDER colour	- byte
BORDER width	- byte *
PAPER colour	- byte
INK colour	- byte *
WINDOW width	- word
WINDOW height	- word
x origin	- word
y origin	- word

*
These are pairs of bytes, ENTERed by POKE _W as words. Generate the PAPER and INK word, for example, as 256*PAPER + INK. Thus white PAPER, red INK is 256*7+2=1794

Derek V. Wilson

```
  1 REMark PROGRAM LISTING 1.0 - M. O. Newport. 1984
  2 WINDOW 449,170,33,30: WINDOW #0, 449,50,33,206
  3 OPEN #3, con_449xl0a33x16
  4 n=6: GO TO n
  6 CLOSE #2: ch2$="closed": lne=100: title: RENUM 6 TO 7;5,1
  7 RENUM 100 TO 32760;100,10
  8 IF ch2$="open": CLOSE #2: ch2$="closed"
  9 MODE 4: display
 10 REPeat choice
 11    key=CODE(INKEY$)
 12    SELect ON key
 13      =216: lne=lne+10: scroll_down
 14      =208: lne=lne-10: scroll_up
 15      =200: lne=lne+100: display
 16      =192: lne=lne-100: display
 17      = 32: jump: display
 18      = 10: mode_type 2: EXIT choice
 19      =232: help: display
 20      =240: run_program
 21      =236: save_quit: EXIT choice
 22    END SELect
 23 END REPeat choice
 24 STOP: REMark ——————————————————————————————
 25 DEFine PROCedure display
 26    BORDER 5,4: PAPER 7: INK 2: CSIZE 0,0: CLS: mode_type 1
 27    IF lne<100: lne=100
 28    FOR i=1 TO 14: position 1.0: LIST #1, lne+10*(i-1)
 29 END DEFine: REMark ——————————————————————————————
 30 DEFine PROCedure scroll_down
 31    position 2,0: CLS 1: SCROLL -10: position 14,0: LIST #1, lne+130
 32 END DEFine: REMark ——————————————————————————————
 33 DEFine PROCedure scroll_up
 34    IF lne=90: lne=lne+10: RETurn
 35    position 13,0: CLS 2: SCROLL +20
 36    position 1,0: LIST #1, lne: position 1,0: SCROLL -10,2
 37 END DEFine: REMark ——————————————————————————————
 38 DEFine PROCedure jump
 39    WINDOW #3, 186,10,33,16: CLS #3
 40    INPUT #3, " START AT LINE NUMBER: "; k
 41    lne=10*INT((k+9)/10)
 42    PAPER #3, 0: CLS #3
 43 END DEFine: REMark ——————————————————————————————
 44 DEFine PROCedure mode_type(t)
 45    WINDOW #3, 86,10,396,16: PAPER #3, 4: INK #3, 0
 46    SELect ON t
 47      =1: PRINT #3, " DISPLAY MODE ": RETurn
 48      =2: PRINT #3, "   EDIT MODE    ": RETurn
 49      =3: PRINT #3, "   HELP MODE    ": RETurn
 50 END DEFine: REMark ——————————————————————————————
 51 DEFine PROCedure help
 52    mode_type 3: PAPER 4: CLS: INK 0
 53    FOR y=10,34,72,92: LINE 0,y TO 200,y
 54    LINE 27,0 TO 27,100: LINE 130,34 TO 130,72: INK 2
 55    position 0,0: PRINT " MODE ": position 0,33: PRINT " COMMANDS "
 56    position 2,0: PRINT " LOAD ": position 7,0: PRINT " DISPLAY "
 57    position 12,0: PRINT " EDIT ": position 15,0: PRINT " HELP "
 58    INK 0: position 2,13: PRINT "Use MRUN from edit mode to load program to be listed."
 59    position 3,22: PRINT "If necessary RENUM before loading."
 60    position 5,11: PRINT "arrow right .. Page forward": position 5,47: PRINT "arrow left
.. Page back"
 61    position 6,11: PRINT "arrow down ... Scroll down": position 6,47: PRINT "arrow up..
```

```
.. Scroll up"
62    position 7,11: PRINT "space bar .. Jump to selected line": position 7,51:
PRINT " F1 ..... Help "
63    position 8,11: PRINT " ENTER .....     Change to edit mode ": position 6,51:
PRINT " F2 ..... Save/Quit "
64    position 9,11: PRINT " F3 ...... Run listed program "
65    position 11,11: PRINT " All SuperBASIC editing facilities available:     EDIT
using "
66    position 12,11: PRINT "cursor + CTRL keys or type in line. Also DLINE, RENUM. "
67    position 13,25: PRINT " RUN .... Return to display ": position 15,24: PRINT " space bar
.... Return to display "
68    WINDOW #3, 186,10,33,16: c=1
69    REPeat loop2
70       IF c=6: PRINT #3, " PRESS SPACE BAR TO CONTINUE "
71       IF INKEY$(0)=CHR$(32): EXIT loop2
72       IF c=25: CLS #3: c=0
73       c=c+1
74    END REPeat loop2
75    PAPER #3, 0: CLS #3
76 END DEFine: REMark ————————————————————————
77 DEFine PROCedure save_quit
78    PAPER #3, 0: CLS #3
79    WINDOW 280,70,110,46: BORDER 2,2: PAPER 0: INK 7: CLS
80    position 1,6: PRINT "Save listed program to microdrive"
81    position 2,2: PRINT "e.g. SAVE MDV1_program _name,100 to 32760"
82    position 4,12: PRINT "Then RUN to continue"
83    position 5,6: PRINT "or RESET to return to SuperBASIC."
84 END DEFine: REMark ————————————————————————
85 DEFine PROCedure run_program
86    PAPER #3, 0: CLS #3: CLOSE #3: CLS #0 : CLS
87    OPEN #2, con_449x170a33x30: ch2$="open": RUN 100: RETurn
88 END DEFine: REMark ————————————————————————
89 DEFine PROCedure title
90    MODE 4: BORDER 5,4: PAPER 7: CLS
91    BLOCK 274,40,71,30,0: BLOCK 268,36,73,32,2
92    INK 0: CSIZE 3,1: position 2,5: PRINT "PROGRAM   LISTING"
93    CSIZE 2,0: position 10,7: PRINT "M. D. Newport  1984"
94    CSIZE 1,0: position 13,14: PRINT "( Tel. 0922 - 22725 )"
95    PAUSE 130: CSIZE 0,0: help
96 END DEFine: REMark ————————————————————————
97 DEFine PROCedure position(row,col)
98    IF VER$="FB": AT col,row: ELSE : AT row,col
99 END DEFine: REMark ————————————————————————
32766 REMark This line prevents line 32767 being renumbered.
32767 STOP
```

Special Characters in SuperBASIC

The following is a little program which prints on to the screen all the foreign language characters and symbols in the QL keyboard. The ASCII number is printed as well. Unfortunately, they are not accessible when using Quill, although of course whether they can be printed out would in any case depend upon the printer. In SuperBASIC you can type them on to the screen by using SHIFT & CTRL, or CTRL alone, as indicated or, page 7 of CONCEPTS.

```
100 CSIZE 3,1
110 INPUT "Enter 1,2,3 or 4 here "! a
120 SELect ON a
130 ON a=1: b=123:c=146:GO TO 160
140 ON a=2: b=146:c=169:GO TO 160
150 ON a=3: b=169:c 192                 W.T.COWHIG,
160 FOR d= b TO c                       21, Priory Road,
170 PRINT "   " CHR$(d);d,              SALE,
180 END FOR d:GO TO 110                 Cheshire M33 2BS
190 ON a=4: PRINT "E N D"
```

MODEM PROGRAM

The following QL modem program may be of interest/use to the group. It is incomplete (for obvious reasons) but I tried to keep the form of the supplied software packages so that users are familiar with operation.

```
100 DEFine PROCedure set_screen
110    MODE 4: WINDOW #2,512,224,0,0
120    WINDOW #0,512, 32, 0, 224: BORDER #0,1,7
130    FOR w=0 TO 2: PAPER #w,0: INK #w,4: CLS #w: NEXT w
140 END DEFine
150 DEFine PROCedure print_prompts
160    WINDOW #3,512,43,0,0: PAPER #3,0: CLS #3: BORDER #3,1,7
170    WINDOW #1,512,181,0,43 : CLS #1
180    INK #3,7: LINE #3,120,0 TO 120,102 : LINE #3,775,0 TO 775,102
190    INK #3,4 : PRINT #3," TERMINAL " : AT #3,1,8 : PRINT #3, "F1"
200    AT #3,2,2 : PRINT #3, "HOST" : AT #3,3,8 : PRINT #3, "F2"
210    AT #3,0,71 : PRINT #3, "COMMANDS" : AT #3,1,78 : PRINT #3, "F3"
220    AT #3,2,71 : PRINT #3, "ESCAPE" : AT #3,3,77 : PRINT #3, "ESC"
230    INK #3,2 : AT #3,1,2 : PRINT #3, "press" : AT #3,3,2 : PRINT #3, "press"
240    AT #3,1,71 : PRINT #3, "press" : AT #3,3,71 : PRINT #3, "press"
250 END DEFine
260 DEFine PROCedure no_prompts
270    WINDOW #1,512,224,0,0 : CLS #1
280 END DEFine
300 DEFine PROCedure manual _mode
310    LOCal tx$, rx$, echo
320    OPEN #4,ser1 : echo = 0
330    REPeat manual_loop
340       tx$ = INKEY$ : rx$ = CHR$ (0)
350       IF CODE(tx$) = 27 : EXIT manual _loop
360       IF CODE(tx$) = 232 : echo = 0
370       IF CODE(tx$) = 236 : echo = 1
380       IF CODE(tx$) >239 AND CODE (tx$) <253 : fkey_press
390       IF CODE(tx$) = 10 : PRINT #3, CHR$(13); : REMark add c/r to l/f
400        IF CODE (tx$) =0 : rx$=INKEY$ (#3) : IF CODE (rx$) =0 : NEXT
manual_loop
410       IF CODE (tx$) >0 AND CODE(tx$) <128 : PRINT #3,tx$;
420       IF echo : PRINT tx$; : PRINT #3,rx$;
430       IF CODE (rx$) >0 AND CODE (rx$) <128 AND CODE (rx$)<>13 :
PRINT rx$;
440    END REPeat manual_loop
450    CLOSE #4
460 END DEFine
500 DEFine PROCedure ascii_save
510    INPUT "Filename: " ; filename$ : INPUT "Drive number: " drive$
520    filename$ = "mdv" & drive$ & "_" & filename$
530    PRINT "View - Y/N: "
540    view_copy$ = INKEY$(-1)
550    IF CODE (view_copy$) = 78 OR CODE (view_copy$) = 110 THEN
560       OPEN #4, ser1 : PRINT #4, CHR$ (13) : CLOSE #4
570       COPY ser1 TO filename$
580     ELSE
```

```
590      OPEN_NEW #5, filename$ : OPEN #4, ser1
600      filewrite = 0
610      REPeat save_loop
620        tx$ = INKEY$ : IF CODE (tx$) = 27 : EXIT save_loop
630        IF CODE(tx$) = 241 : filewrite = 1
640        IF CODE (tx$) =242 : filewrite = 0
650        IF filewrite THEN
660          rx$ = INKEY$ (#4) : IF CODE(rx$) = 0 : NEXT save_loop
670          IF CODE(rx$) = 26 : EXIT save_loop
680          IF CODE (rx$)<> 13 : PRINT #5, rx$
690        END I F
700      END I F
710    END REPeat save_loop
720    CLOSE #4 : CLOSE #5
730 END DEFine
```

Trevor Smith

QL USER DEFINED   GRAPHICS

This is a short program in SuperBASIC to implement User-Defined Graphics on the QL. The DATA statements in lines 210 onwards contain some machine code which is POKEd into memory at the location reserved by the RESPR statement in line 110. This sets up the required character set, using parameters passed to it defining the code of the first character required, the number of characters for which space has been reserved, the address of that space, and the channel for which these character are being defined: also provided is a function that returns the start address at which bit patterns may be POKEd, given a simplified version of these data.

This program is used by simply typing it in as shown, then defining a character set by a function call such as:

Chars = udg (1,128,16)

This reserves space for sixteen characters.

Characters are defined as a bit pattern, which MUST occupy ONLY bits 6 to 2 inclusive of each byte - bits being numbered 0 to 7, with bit 7 the most significant, and bit 6 being the leftmost element. Each character requires nine consecutive bytes to define it with the first byte corresponding to the top of the character.
Thus the line:

For i = 0 TO 8 : POKE chars + i,124:next i

will set up character 128 as a solid block, similar to the cursor. CSIZE and all other character control statements will work in exactly the same way for the user defined characters.

An example of the first of which may be printed by using:

PRINT CHR$(128)

Please note also that this program may in some cases, alter some of the symbols in the existing character set: this will not, however, result in your programs becoming unreadable!

```
100 RESTORE
110 a=RESPR(64)
120 FOR I=0 TO 46 STEP 2
130    READ x:POKE_W a+i,x
140 END FOR i
150 DEFine FuNction udg (chan,start,num)
160    LOCal space
170    space=RESPR(2+9*num)
180    CALL a,chan,space,start,num
190    RETurn space+2
200 END DEFine
210 DATA 8302,48,-15620,40,-11839
220 DATA -19986,52,27676,8246,-30720
230 DATA 27926,8256,28672,-27703,9282
240 DATA 5251,21316,5444,1,28709
250 DATA 20035,20085,28922,20085
```
                                              Derek V. Wilson

The QL Keyboard - a review by DORIAN C KILLICK

Long before my QL arrived I had measured the 'actual size' photograph of the keyboard in Sinclair's QL brochure. Even now I blush at the memory of furtive typing practice on the back of that leaflet!! But the reality confirmed the phantom; compared to 'industry standards' the QL keyboard measures up . . physically. The pitch of the keyboard is alright providing you use the three plastic feet supplied. These appear to have a design fault in that someone at Sinclair Research didn't take account of the fact they have to be pushed into rubber grommets, which are springy, which means they fall out when you move the machine, which means you get cross ===== etc.

As far as layout is concerned, QWERTY rules OK so there's nothing wrong in the alphanumeric department. Most of the symbols and punctuation marks are exactly where you would expect them to be and the QL has a bonus, Dollar, Hash and Pounds signs are all there. I don't think any of the Micros I have owned or used supported all three .... could be useful. TAB, CAPS LOCK, CONTROL, SHIFT and ALT are large size keys with ENTER an even larger reverse 'L' shape. There are 3 Functions keys to the left of the main keys. I like the look and the layout of the QL keyboard even if the black does show up every speck of dust.

In operation ... well this is where I got that sinking feeling. You see I have waited a long time for the QL and while I was waiting I read every single word that was published about it (Oh you did as well, Don't suppose you're reading this at 2.30 am, are you?) Nothing in these articles prepared me for actually USING the QL, you know, hitting the keys until all hours. I've even asked friends to try it out and now, after due deliberation I declare it good, very good, BY COMPARISON WITH THE SPECTRUM ... which was probably the worst keyboard in the world - and oh dear, does that mean the QL keyboard is the second worst? Well it's certainly a strong contender.

Yes, I did hear Sir Clive, on Radio and Television, expounding the virtues, the technical merit and the precision engineering that went into the keyboard design. But at the end of the day no amount of technological wizardry is going to alter the fact that the keyboard has to be used, by people.

The QL keys have no positive feedback and feel toy-like and plastic in use. Positive feedback although very important is something that most people are unaware of ... but sure as hell notice a lack of. It is the signal to the user that a key stroke has produced output, the thud of letter striking paper on a mechanical typewriter is a good example. Micro manufacturers go to some trouble to design positive feedback into their keyboards, e.g. a definite stop on the key travel, an audible click, even musical notes (a bit too much for me) have been used as signals to the user that contact has been made. The QL keyboard has none of these features yet unfortunately needs them more than most.

If you are a moderate speed typist (even two fingered like me) you will occasionally hit two keys almost simultaneously ... say a 't' and 'h'. In this example you have pressed the 'h' before releasing the 't'. Most keyboards can handle this and the letter h' will appear as you lift your finger off the 't' - the QL cannot cope and will output 'tt' instead of 'th'. Because there is no RUBOUT key you now have a two key operation to correct the error. Going back into the mists of time I vaguely recollect some of the early micros exhibiting similar limitations - the term 'two key rollover' is back there somewhere but is such an ancient expression it no longer appears in computer glossaries.

Changing the subject for a moment, QL file names must be specified in a particular format, viz: MDV1_FILENAME_EXT (where EXT is an optional extent). The use of underscore as a delimiter is O.K., you have to use something, CP/M uses the full-stop (or period!). BUT,   getting back to the keyboard, why, oh why, did Sinclair make the '_' a two key-stroke character. Even with the CAPS LOCK on it is still necessary to hold the SHIFT key down to get at the   '_'.   This nonsense is compounded if you follow the User Guide which recommends using the underscore in variable names. And what is the other character on the '_' key that is so important it takes precedence over the most frequently used QDOS symbol .... the minus sign!! Dear Sir Clive, the remedy is so simple, reverse the underscore key and you will improve both the keyboard and your relations with QL owners.

Function keys. Function keys!!??? No, they are NOT Function keys. The five so called QL Function keys return ASCII codes 232,236,240,245 and 249, when pressed. That is their sole capability; they cannot be programmed, set, defined or controlled in any way. You cannot use them unless you write your own software and enclose it within an INKEY Loop and test every key depression for the above codes. Function keys on the QL are a prime example of Sinclair hype; Sir Clive advertised them, you bought them, and you're left holding the bag of worms after you discovered that what Sinclair calls function keys is like nothing you ever dreamed of.

Other things obviously missing from the keyboard include a light on the CAPS-LOCK key (because there is no way telling what position it is in), Cursor speed adjustment (one of my micros has this feature - two parameters - one for speed rate and one for initial delay before repeat starts). If the QL had got battery backed CMOS for the clock (as the original publicity said), a couple of bytes could have been reserved to store the repeat rate thus adding a real 'User friendly' facility. Of course an adjustable cursor rate is useless if your cursor is incapable of anything other than slow slow slow.

Conclusions. Apart from appearance, the QL keyboard is an inexcusable joke. In   spite of all the fancy literature and hullabaloo, Sinclair Research have succeeded only in producing a 1st generation keyboard and talk of 'user friendly'

and 'ergonomics' is pointless if your reference is the Spectrum. With so many good (or at least mediocre) keyboards on the market I am astounded that a £400 micro can be designed with anything so poor and as lacking in facilities as the QL keyboard.

One—well three, small qualifications to these remarks, IF you have never used a typewriter style keyboard, IF you don't intend to do much typing on the QL, IF your last computer had a 'dead flesh' keyboard, you just might wonder what all the fuss is about.

Personally I like using micros whenever possible and there are only two reasons why this review was not written on the QL, one is the keyboard, the other is QUILL but that's another review!!

IQLUG JOTTINGS

I enclose these notes as random thoughts and comments for the Quanta magazine. My previous writings were interrupted a month ago by the arrival of my QL and are now largely out of date - so I will start again, using the Quill.

Basically I am well pleased with the QL in the context of a £400 Home Computer with a set of professional software which together should satisfy my hobby interests as well as being able to do some business work at home. I had been looking for sometime to replace my ageing Nascom; in particular something with good graphics - but with sufficient memory left to exploit them,, 80 column text, professional word processor and spread sheet programs and the convenience of discs without their cost. Also it was important to chose a computer that could be expected to receive major support from the industry. The QL appears to be the first to give me my required enhancements at a cost I could justify for home use.

Whilst we might all regret the absence of certain features, I feel Sinclair were absolutely correct to hold the price to £399 to match the BBC micro; it will be undoubtably possible to get the additional features as add-ons eventually. My first reaction to the absence of a Centronics interface was to couple the RS232 ports of my QL and Nascom computers and use my existing Centronics Link to my MX-80/11 Epson printer. This I did using the Nascom as a printer buffer, with the Nascom software written in Pascal. However the business of loading the various routines from cassette ,including the Pascal compiler (since I have not located the separate runtime routines) was so inconvenient that I quickly acquired an Epson 8145 RS-232 interface board. This works fine at 9600 baud and the Quill,Archive and Abacus programs can be readily configured for the MX-80. The Easel program only supports the FX-80 printer at present, any information on configuring for the MX-80 would appreciated. The 8145 card supports the bit graphics print mode and has a useful 2K print buffer. SCI(U.K.) were very helpful with advice on the phone and were able to supply the interface card from stock; it was dispatched at 5.20 pm. and delivered by post at 6.30 am.(!) next morning.

I too suffer from screen crawling on my monochrome monitor; the display was made tolerable by terminating the monitor video with a 75 ohm resistor (previously high impedance). I hope the effect is confined to monochrome monitors - any reports on this?

Reference cassette interfaces, I am in two minds; it is a major step up for me to have the microdrives, I would gladly never use cassette tapes again. Whether I will or not depends on the reliability of the microdrives and availability of low cost floppy disc drives. However if I am forced to return to cassette storage I would prefer to use an RS232 port and have considered using the Cutts hardware design that I have been reliably using at 2400 baud on my Nascom. It would seem logical to adopt a Spectrum type software protocol.

Generally I find the software supplied to be very useful; in particular the Abacus I find superior to the SuperCalc I am used to and it runs much faster than on the works 8-bit system under Cromix. I think that Psion may well tune up the speed of operation of Quill etc. on the next issue. I don't think they had much time to adapt their software to the QL computer first time round and I suspect they did not appreciate the speed restrictions of the microdrives. However I would not be too critical of their speed; not all disc systems are that fast, but speed is one thing I will trade against cost in a home computer. For extended business use I would feel differently, but then I would expect to pay considerably more.

I would have liked to have attended the July Weekend workshop on the Sunday, but unfortunately I shall still be jet lagged from a return from the States on the previous day. I hope you may publish an evaluation of the various monitors etc.

Des Geere,
20 Brunswick Square,
Hove, Sussex
EN3 1EH

ANYONE FOR AI?

Members of IQLUG may be interested to know that I am currently engaged on two books and a couple of pieces of software involving (rudimentary) AI for the QL. I would be interested in making contact with any member who is exploring AI on the machine. (Recursion, large RAM and the potential of parallel processing make it a good machine for small AI projects). My main concerns lie in natural language processing but all branches of AI interest me. Possibly the IQLUG newsletter would be interested in the odd note on implementing AI on the machine and, if enough members are interested, an AI subgroup might be worth forming.

Dr Noel Williams,
35 Coverdale Road,
Sheffield,
S7 2DD

Tel: (0742) 588058

QUESTIONNAIRE RESULTS

Whilst I cannot find room for the report on the Questionnaire that has been sent to Sinclair, here are the most popular features chosen by those members (138) whose forms were returned by Saturday 25 August. Some forms were not included because the selections totalled more than 16.

1. Error trapping from SuperBASIC programs
2. A RENAME statement to change a file's name
3. The ability for the filing system to overwrite an existing file without having to create any extra file space first

4. Wild card filename specification. Allow COPY, DELETE etc. to operate on multiple files at the same time
5. Ability to calculate free memory space
6. A full-screen editor available all the time from BASIC
7. An extension to the DIR command to allow date, time and file sizes to be printed out

Leon Heller

SOME GENERAL COMMENTS ABOUT THE IQLUG LIBRARY

Firstly, thanks very much to all who have contributed to the IQLUG software library - either by sending programs or by helping with copying cartridges. I can continue to cope with 10 / 20 requests for programs per week, but if demand grows (as I hope it will) I would like to ask those who have already received copies of IQLUG cartridge 1 if they will give copies to local IQLUG members. I must stress that copies are not to be given to non-IQLUG members because the intention of the library is to provide a strong incentive to non-members for joining IQLUG. The group is a non-commercial and non-profit-making organisation and we will die without more members. Please encourage your friends to join.

Name_bas : A SuperBASIC program loaded using "LOAD" / "LRUN"

Name code : A machine code program loaded using "LBYTES"

Name_exec : A machine code program run using "EXEC"

Name_doc : A text file - use QUILL "LOAD" or "IMPORT"

Name_asm : Assembler source file (contributions please ?)

Name_arc : A control procedure file for Archive (contributions ?)

Could contributors to the library adhere to these naming conventions please, and also add the date and their name to the top of anything submitted to the library - I won't forget who sent it then! Any programs containing liberal comments and which are properly debugged will be distributed unless you request otherwise. Could you please state whether the programs are "all your own work" and if the program has been typed in from a magazine, please insert at the top of the program the name of the magazine, issue number and author, and I will ensure that there are no copyright restrictions before the program is distributed.

A reminder for those who don't know - library requests and contributions should be supplied via a formatted microdrive cartridge, sent in a small jiffy bag with return postage and a sticky self addressed label enclosed. Also a cheque for £1 made payable to QJUMP should be enclosed if you want the Tony Tebby machine code programs + screen editor.

Rob Sherratt,
IQLUG Software Librarian,
"Betheden",
129, Melford Way,   Home Tel 0394 272782
Felixstowe,   between o and 10. 0 pm only
Suffolk.
IP11 9UH

CONTENTS OF IQLUG LIBRARY CARTRIDGE 1 - DATE 1st Sept 1984

FILENAME	AUTHOR & DESCRIPTION
boot	Rob Sherratt : Runs automatically from mdv1_ after a reset. Initialises date and time and IQLUG standard windows, and loads Tony Tebby's machine code extensions (assuming you've paid £1 to QJUMP for them - phone 0394 272782 and ask Rob for details). If you haven't paid £1 then you won't get the next 9 files.
exten_code	Tony Tebby : A machine code file loaded by BOOT which provides SuperBASIC extensions CURSEN, CURDIS, MAKE_ROOM and TAKE_ROOM which are used by the "sedit_bas" screen editor (see the text file 'extensions guide doc" for full details).
job_code	Tony Tebby : A machine code file loaded by BOOT which provides a job control language for use under SuperBASIC. Adds the commands JOBS, SJOB, RJOB, PJOB, KJOB. Essential if you are using multitasking on your QL.
files_code	Tony Tebby : A machine code file loaded by BOOT which adds the following file handling commands to SuperBASIC : SET_POS, POS, PUT, GET, BPUT, BGET.
clock_exec	Tony Tebby : A digital clock multitask program. Run it by typing "exec mdv1_clock_exec". Stop it (if you can) by using JOBS to find out what job number it is (eg. number 1 tag 0), then kill it using KJOB. (eg KJOB. 1,0).
clockf_exec	Tony Tebby : An analogue clock face multitask program. Run and stop it as for "clock_exec".
clocktv_exec	Tony Tebby : A digital clock multitask program set up for use with a QL initialised in TV mode. Run and stop it as for "clock_exec".
sedit_bas	Tony Tebby : An extremely good full screen editor with automatic find/ replace facilities. It works a lot faster than QUILL and will easily edit basic programs - you have to have renumbered your original basic program first, to leave gaps in the line number range where you plan to do any inserting. See "extguide_doc" for full details.
fastbackup_bas	Tony Tebby : A method of transferring files extremely rapidly from one mdv to another. Uses the "files_code" extensions and relies on the fact that it can hold all the files in memory at the same time. At present is only set up to copy the Tony Tebby programs. Would need some modification before it could do a general purpose transfer (eg for IQLUG library cartridges) - any volunteers ?
extguide_text	Tony Tebby : User's guide to all the Tony Tebby programs - in particular has the instructions for using "sedit_bas". This file has been created using "sedit bas", and may be viewed using the COPY command (eg copy extguide_text to scr) or by IMPORTing

it into QUILL.

gprint_code   PSION Ltd :   this file is distributed to everyone on their EASEL cartridge. It is included here because it is installed and used by Spirograph_bas. Gives a pretty screen dump to an FX80 compatible printer.

stripes_bas   SINCLAIR :   one of the examples from the QL User Guide - rather pretty because it shows off all the different colour combinations of the QL. Best if you type MODE 256 first.

clearbeep_bas   Rob Sherratt :   flashes at you and makes a variety of burping noises.

list_bas   Rob Sherratt :   a useful utility program for doing bulk listing of several programs on a microdrive cartridge. It asks you which files to print, and you then leave it to get on with it. Inserts pretty headings, paginates, and responds to "REMark skip" in basic programs by generating a form feed. Easily modifiable for printers other than the FX80 it is set up for at present.

spirograph_bas   Rob Sherratt :   the first part of a harmonograph / spirograph pattern drawing program. The first part installs the graphics dump program "gprint_code" and then chains the main routine which is called "spirograph_merge_bas". This technique should be useful for many different applications requiring screen dumps.

dupl_bas   Rob Sherratt :   a general purpose file duplication program which copies all files from a source microdrive cartridge to the destination cartridge specified. Future development will increase speed by using Tony Tebby's technique in "fastbackup_bas" but someone needs to work out how to read microdrive file headers / directory entries first. Any offers?

clock_setup_bas Kerian Ltd :   very helpful firm who supplied Malcolm Newport with some application notes on multitasking and programming custom character sets. Kerian have given permission for IQLUG to publish the AN's and distribute copies of the programs on them. This one generates an "execable" file called 'dig_clock_exec'.

designs_bas   Greg Taylor :   a suite of 3 programs. The first generates pretty "kaleidoscope" type patterns, the second and third routines allow you to save and restore the screen memory from microdrive. Would anyone like to modify the screen dump routines to do some character compression (eg store a character count when there are a number of duplicated bytes of memory).

panic_bas   Anonymous :   someone had fun writing this - it appeared on my cartridge during the IQLUG AGM at Stony Stratford at the end of July. Anyone admit writing it ?

dig_clock_exec	Kerian Ltd : the multitask program generated by "clock_setup _bas". Run and stop It as for "clock exec".
factorial_bas	Gary Williams: a factorial subroutine.
primes_bas	Gary Williams: a very fast lowest common factor generator subroutine.
boot2_bas	Gary Williams: a menu-driven BOOT program - anyone fancy combining this with the Rob Sherratt BOOT program and getting the resulting program working properly, both in TV and Monitor modes ?
spirograph_ merge_bas	Rob Sherratt : the second "main" part of the pretty spirograph pattern drawing program - split into 2 parts so the installation of the graphics dump software never happens more than once (hopefully).
dir_lst	Tony Tebby : this is just the file output produced by the DIR command - a pity more information is not available (eg file size, file type, date time last accessed etc). Would anyone like to write a machine code ",(DIR" extended directory command. Lots of fame!
namdump_bas	Norman Macleod: Memory dump program. Amazing the advances made in medical electronics nowadays!
boot_jmr_bas	John Ridge: A BOOT program which produces an index to John's other contributions to the IQLUG library.
charset_bas	John Ridge: Produces a full QL character set tabulation, indexing each character with its decimal equivalent (ie for use in "PRINT CHR$(n) Statements).
charset_hex_bas	John Ridge: Similar to "charset_bas", except each character is Indexed with the corresponding hex code - eg for use in assembler programs.
beeper_bas	John Ridge: Allows you to play with various parameters of the BEEP command.
erase_bas	John Ridge: A general purpose file deletion program which allows you to specify which files on microdrive you want delete, and then goes away and deletes them. You play with this at your peril!
dechex_bas	John Ridge: Subroutine to convert from decimal to hexadecimal.
proglist_bas	Malcolm Newport: A full screen basic program editor subroutine for inclusion in your own program which is under development. A photocopy of Malcolm's instructions is enclosed.
pattern_bas	Malcolm Newport: Draws a pretty picture looking rather like an excerpt from one of the Star Trek movies I watched!
libguide_doc	Rob Sherratt: You're reading it now - the hitch hiker's guide to IQLUG software library cartridge number 1. You must use QUILL to read or print this file.

A PREVIEW OF PROGRAMS THAT WILL APPEAR IN LIBRARY CARTRIDGE 2

terminal   Jeremy San :   a terminal emulator written in machine code which will allow your QL to connect "online" to a mainframe computer and upload and download files.

spool   Mike Finley :   a machine code file spool program which allows file transfers to the serial link (eg printer) to continue at the same time as you are editing or running another program.

monitor   Various :   machine code debugging aids of various descriptions are presently under development.

None of these programs will be distributed until I have received enough program contributions to fill a second microdrive cartridge, so send them in fast!

QL -- RML 380Z CONNECTION

I'm not claiming that it's much use - but in case your QL is sitting next to a 380Z, this is how you can connect them and send files from one to the other. Perhaps you don't trust micro-drives and want to keep your backup material on good old low-tech floppies........

The 380Z must have a serial interface (SIO4) and run under CP/M 2.2.

Suppose that we want to keep a SuperBASIC program mdv1_demo_bas in the CP/M file B: QLPROG. EXP, then get it back into mdv2_demo_bas:

1. Plug the QL's RS232 lead into the SER2 socket.   The 25-pin end goes into the 380Z's SIO4 (serial) socket.

2. Set both machines to 1200 baud -

    380Z - type CTRL-F, then O (the letter!), 4 in answer to the first prompt and 3 to the next. Then K to return to CP/M.

    QL - baud 1200 <ENTER>

3. Start up the 380Z as receiver -

    PIP B: QLPROG. EXP=RDR: [Z],EOF: <RETURN>

    then transmit from the QL -

    copy_n mdv1_demo_bas to ser2iz <ENTER>

4. Wait for some time (useful for planning high-speed links with hand-shaking!)

5. To check that the process is reversible, start up the QL as receiver -

    copy ser2iz to mdv2_demo_bas <ENTER>

    then transmit from the 380Z -

    PIP LST: =B:QLPROG.EXP[Z],EOF: <RETURN>

No problems? And if you want to swap keyboards, experiment with CON: and con_ instead of the file-specifications.

J . M. Ridge,
59 Cumnor Hill,
Oxford OX2 9EY

```
100 REMark W T Cowhig 21 Priory Road SALE M33 2BS 061-973-3604 July 27th 1984
110 k=14500: CLS
120 INPUT; "Lineprinter or send to File ASCEE Enter 1 or 2 " ;g
130 REMark This prints out in ASCII
140 ON g GO TO 150,160
150 OPEN#4,ser1c:GO TO 170
160 OPEN_NEW #4,mdv1_ASCEE: REMark     Remove NEW if re-using ASCEE!!
170  FOR n=0 TO 250
180     IF (PEEK (k+n)) <= 128 THEN b= (PEEK (k+n)) : PRINT! CHR$ (b);: PRINT #4,!
CHR$(b);
190    IF PEEK(k+n) > 128 THEN c=(PEEK(k+n)) :PRINT! c;:PRINT #4,! c;
200  END FOR n
210 T$= "This is ROM from 14500 to 14750 - 38A4 to 399E"
220 PRINT T$: PRINT#4,T$
230 CLOSE #4
```

NOTES FROM YOUR SECRETARY

We have had to scrap the idea of the hospitality room for the PCW show as the cost of 150 pounds is too much for the current membership numbers to stand. The numbers renewing are very disappointing and I will be sending out around 50 post paid circulars to find out why. if anybody wants to send in comments to me, please do.

I am now in a position to advise those members wanting assistance on monitors and printers of those members actually using them on their QLs. This information will only be given to those who are currently paid up.

Printers   Epsom....................
                Canon....................
                Brother....................
                Gemini....................
                Tandy....................
                Diablo....................
                Anadex....................

Monitors   Microvitec....................
                Digivision....................
                Dataefficiency....................
                ITT....................
                Electrohome.....................
                Zenith....................

SuperBASIC - tutors required - Please ring me.

Brian Pain

STOP PRESS

I have just received my evaluation copy of 68K/OS from GST. It is in an enormous jiffy bag, and consists of a pair of 16K EPROMs, two Microdrive cartridges and a lever-arch file full to bursting with documentation.

I'll let you know how I get on with it.

Leon Heller